

CLAIMS

1. Portable communication device (10) comprising:
a board (12) for receiving electrical circuits and comprising a ground plane (20)
5 and having at least one throughhole (22),
an antenna element (14) provided on one side of the board, and
an acoustic element (16, 24, 26, 28) placed on the board aligned with the
throughhole,
wherein an electrically conducting material (28; 34) related to the exterior of
10 said acoustic element is connected (30, 32) to the ground plane of said board
for enhancing the efficiency of the antenna.
2. Portable communication device according to claim 1, wherein the antenna
element is positioned with at least one part at a distance above the board, for
15 defining an antenna volume between the board and the antenna element, and
said at least one hole is provided under the antenna element.
3. Portable communication device according to claim 2, wherein the acoustic
element is provided on another opposite side of the board.
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4. Portable communication device according to claim 3, wherein an acoustic box
(18) associated with the acoustic element is provided in the antenna volume.
5. Portable communication device according to any previous claim, wherein the
25 material is a cover (28) of the acoustic element made of an electrically
conducting material.
6. Portable communication device according to claim 5, wherein the cover is
provided with sound apertures.
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7. Portable communication device according to any of claims 1 - 4, wherein the
material is a mesh (34) made of an electrically conducting material placed
between the cover (28) of the acoustic element and the board (12).
- 35 8. Portable communication device according to any previous claim, wherein the
material is connected to the ground plane using electrically conducting springs.

9. Portable communication device according to any of claims 1 - 7, wherein the material is connected to the ground plane using an electrically conducting gasket.
- 5 10. Portable communication device according to any previous claim, wherein the antenna element is a PIFA antenna element.
11. Portable communication device according to any previous claim, wherein it is a cellular phone.